

INTEGRATED SCHOTTKY TRANSISTOR LOGIC CONFIGURATION

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ABSTRACT OF THE DISCLOSURE

A logic gate is described that has an N-type region, which may be an N-well or N-tub, forming a cathode of one or more Schottky diodes and a collector of an NPN bipolar transistor. Accordingly, the Schottky diodes and transistor do not need to be isolated from one another, resulting in a very compact logic gate. The logic gate forms a portion of a NAND function in one embodiment. One or more Schottky diodes between the collector and base of the bipolar transistor act as a clamp to prevent the transistor from saturating. The clamp diodes can also be used to adjust the output voltage of the gate to ensure downstream transistors can be fully turned off.

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